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WHAT DEFINES AN AMIGA??

SUPERIOR GRAPHICS (AND SOUND)

AT ROCK BOTTOM PRICE!!

(i.e. superior price/performance)

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OUR ENVIRONMENT

- LIMITED RESOURCES: DOLLARS AND HEADCOUNT
- CRITICAL SHORTAGE OF VLSI "CUSTOM CHIP" DESIGNERS
- MAJOR FOCUS ON LOW END REQUIRED
- NON-COMPETITIVE SEMICONDUCTOR FAB FACILITY
  - TODAY: FUNCTION/PERFORMANCE
  - 1994: COST
- INTENSE (AND GROWING) COMPETITION AT LOW END
- INCREASING MARGIN PRESSURE ---> NEED ON-GOING COST REDUCTIONS
- BASIC EXPERTISE

  AMIGA O/S

  GRAPHICS - BLITTER, COPR, "TRICKY" H/W (HIM), SPRITES
- SUPERFLUOUS EXPERTISE

  FDD

  SERIAL

  SYSTEM GLUE
- WEAKNESSES

  TOP DOWN SYSTEMS DESIGN FOR MANUFACTURING

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OBSERVATIONS AND DECISIONS

- NO CONCENSUS AT DEFINITION MEETING
- NO CONCENSUS LIKELY
- POLITICAL ENVIRONMENT NOT UNDERSTOOD OR ACCEPTED BY "TEAM"
- REQUIREMENT FOR NEW CHIP SET IS ABSOLUTE (COST/MARGINS)
- RAPID ACTION REQUIRED
- NEED 1ST PASS SUCCESS
- PING-PONG DESIGN TEAMS NECESSARY FOR SUCCESS (LONG TERM)
- NEXT GENERATION AMIGA'S NEED DEFINITION - 3+ MONTHS REQUIRED
- CONCENTRATE DESIGN RESOURCES ON VIDEO/AUDIO ENGINES
- USE OFF-THE-SHELF MACRO'S AS APPROPRIATE
  - FD
  - SERIAL
  - PARALLEL
  - DMA (?)
  - AUDIO COMPRESSION (?)
  - ??

A+ CHIP SET

REQUIREMENT:	JAN 94	SYSTEM SHIPMENTS
	$\leq$ 3	SUB-MICRON CMOS CHIPS
	COST	LESS THAN OR EQUAL TO TODAY'S ECS
		SILICON COSTS WITH HIGHER INTEGRATION
	FUNCTION	256 COLORS (256K PALET ACCEPTABLE)
		SUPPORT FOR 2X CPU
		BETTER SYSTEM BANDWIDTH (3 CAS)
		IMPROVED I/O DESIRED

PLAN:

1. COST/FUNCTION REDUCE LISA - SAME PIN OUT
   - o 256K PALET
   - o 8 BIT HAM
   - o 16 BIT SPRITES
   - o ASSESS INTERNAL DAC (COSTS/RISK)
2. INTEGRATE ALICE AND PAULA IN CMOS
   - o 3 CAS SUPPORT
   - o "EXTERNAL" DMA SUPPORT
   - o FIFOs FOR SERIAL
   - o 1.44 MB FDD SUPPORT
3. DESIGN "NEW" SUPER I/O ASIC
   - o STANDARD CELL +
   - o FD MACRO (VENDOR PROVIDED)
   - o SERIAL MACRO (VENDOR PROVIDED)
   - o KB SCAN MACRO
   - o "FLOATING" SRR DMA CHANNEL MACRO
   - o "ALL" GLUE
4. BUILD APPROPRIATE MODELS OF ALL SYSTEM/FUNCTION ELEMENTS TO INSURE TOTAL FUNCTION COMPATIBILITY AND PROVIDE TEST BEDS FOR SW
5. DRIVE TO BEST CASE SCHEDULE-GOAL: $\leq$ 18 MONTHS

FUTURE DIRECTION: CHARTER DESIGN TEAM #2 TO DEFINE NEXT GENERATION AMIGAS (VIDEO AND AUDIO ENGINES)

- o DEFINE NEXT GENERATION AMIGAS VIDEO AND AUDIO ENGINES
- o UNDERSTAND CURRENT STATE-OF-THE-ART IN VIDEO ENGINES
- o UNDERSTAND FUTURE TRENDS FOR VIDEO ENGINES:
  - GAMES (NINTENDO/SEGA)
  - L.E. PERSONAL COMPUTERS (286/ATARI/A500s)
  - PRODUCTIVITY PERSONAL COMPUTERS (386SX/020 CLASS)
  - MID RANGE PERSONAL COMPUTERS/WS (486/040 CLASS)
  - HIGH END PCS AND WORK STATIONS (RISC)
- o DEFINE TWO TIER ENGINE STRATEGY FOR AMIGA
  - LOW END ---> MID RANGE
  - HIGH END ---> MID RANGE
- o DEFINE TECHNOLOGY STRATEGY FOR IMPLEMENTATION
- o DEFINE RESOURCES AND SCHEDULES FOR PHASED DESIGNS

TARGETS: L.E. ---> 1995

H.E. ---> 1996

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